REMARKS

INTRODUCTION

In accordance with the foregoing, claims 1, and 8-15 have been amended. No new matter is being presented, and approval and entry are respectfully requested.

Claims 1-15 are pending and under consideration. Reconsideration is respectfully requested.

ENTRY OF RESPONSE UNDER 37 C.F.R. §1.116

Applicants request entry of this Rule 116 Response and Request for Reconsideration because:

(a) it is believed that the amendment of claims 8-11 puts those claims into allowable form as suggested by the Examiner;

(b) the amendment of claim 1, and 12-15 should not entail any further search by the Examiner since no new features are being added or no new issues are being raised;

(c) the amendments do not significantly alter the scope of the claims and place the application at least into a better form for appeal. No new features or new issues are being raised; and/or

(d) the references applied to the claims are newly cited in the final Office Action, and Applicants should be provided the opportunity to present patentability arguments and amendments in view thereof.

The Manual of Patent Examining Procedures sets forth in §714.12 that "[a]ny amendment that would place the case either in condition for allowance or in better form for appeal may be entered." (Underlining added for emphasis) Moreover, §714.13 sets forth that "[t]he Proposed Amendment should be given sufficient consideration to determine whether the claims are in condition for allowance and/or whether the issues on appeal are simplified." The Manual of Patent Examining Procedures further articulates that the reason for any non-entry should be explained expressly in the Advisory Action.

REJECTION UNDER 35 U.S.C. §102

In the Office Action at pages 3-4, numbered items 7 and 8, claims 1 and 2 were rejected under 35 U.S.C. §102(e) as being anticipated by newly cited U.S. Patent No.6,336,138 to Caswell, et al. This rejection is traversed and reconsideration is requested.

Amended independent claim 1 is directed to a "service distribution device for distributing specified services among a plurality of servers in which there is a difference in processing capacity on a network to balance the server loads." The service distribution device of amended independent claim 1 includes, in relevant part, "a packet capture device capturing packets transmitted through the network to calculate the server processing time and parameters to configure simulation models."

The present invention balances a load among servers when the servers vary in processing capacity. The service distribution device captures packets transmitted through the network and gets the server log from the packets to calculate the server transmission throughput and server processing time to configure the server model. The service distribution device gets the service log from the packets so that it can calculate parameters to configure the service model. The service distribution device uses these models to determine the session time for the specified service, and one server is selected based on that determination.

In the Office Action at pages 3-4, the Examiner asserts that Caswell, et al. teaches "a simulator reading in the server model and the service model and running each simulation" and "a server selection module selecting and specifying an optimum server to distribute services to based on a simulator result." More specifically, the Examiner asserts that Caswell, et al. at col. 6, line 60 to col. 7, line 13 teaches that "The round-robin scheduling balances the load among the servers."

Applicants respectfully disagree with the Examiner's position. Round-robin scheduling is a time-sharing scheduling algorithm. Thus, according to the teachings of Caswell, et al., server load is "balanced" because the load is shifted from server to server in a circular fashion, based on predefined time intervals. Thus, Caswell, et al. fails to teach or suggest simulation or selection of a server based on the result of simulation. As Caswell, et al. is aimed at generating a hierarchical structure of a network and there is no need to determine the session time, Applicants respectfully submit that Caswell, et al. fails to teach or suggest the features of the present claimed invention. Accordingly, Applicants respectfully submit that, for at least this reason, amended independent claim 1 and those claims depending either directly or indirectly therefrom patentably distinguish over the prior art and are in condition for allowance.

Dependent claim 2 depends directly from amended independent claim 1. Accordingly,

Applicants respectfully submit that dependent claim 2 patentably distinguishes over the newly cited prior art for at least the same reasons as amended independent claim 1. Further, Applicants assert that Caswell, et al. teaches that network probes acquire information from the headers of packet transmissions. These network probes deduce the relationships that exist among the servers. Thus, Caswell, et al. fails to teach or suggest acquiring logs from packets to calculate server processing time, or to calculate parameters to configure simulation models. Accordingly, Applicants respectfully submit that dependent claim 2 also patentably distinguishes over the prior art and is in condition for allowance.

REJECTIONS UNDER 35 U.S.C. §103

Claim 3

In the Office Action at pages 5-6, numbered items 18-19, claim 3 was rejected under 35 U.S.C. §103(a) as being unpatentable over Caswell, et al. in view of Microsoft and further in view of U.S. Patent No. 6,314,463 to Abbott, et al. The Caswell, et al. and Abbott, et al. references are newly cited. The reasons for the rejection are set forth in the Office Action and therefore not repeated. The rejection is traversed and reconsideration is requested.

As claim 3 depends directly from amended independent claim 1, Applicants respectfully submit that claim 3 patentably distinguishes over Caswell, et al. for at least the same reasons as independent claim 1 and, therefore, is in condition for allowance.

Further, the Examiner asserts that Microsoft defines throughput as a measurement of (quantity of data/period of time). However, Applicants respectfully submit that Microsoft fails to teach or suggest calculating throughput from a "continuous string of the continuously transmitted packets," as recited in dependent claim 3.

Additionally, the Examiner asserts that Abbott, et al. (see Fig. 5) teaches that the queue delay must also be included in calculating response time and that this corresponds to the formula recited by Applicants in claim 3. Applicants respectfully disagree. In claim 3, "ts" is a time stamp at the time the client (packet capture) receives a response from the server. In contrast to the Examiner's assertion, "ts" is not the "end of processing" time stamp at the server. Claim 3 recites that "ts and ls are the capture time and size of a server response packet, respectively." Applicants respectfully submit that Abbott, et al. teaches a queue delay before the start of processing, which corresponds to "lc/B" in the present invention. Abbott, et al., however, fails to teach or suggest a time delay after the end of processing, which is represented by "ls/B" in the present invention. Thus, Applicants respectfully submit that including both of these time

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delays in the server modeling module allows for more accurate calculation of server process time.

For at least these reasons, and those set forth above, Applicants respectfully submit Caswell, et al., Microsoft, and Abbott, et al., taken alone or in combination, fail to teach or suggest all of the features of dependent claim 3. Accordingly, Applicants submit that dependent claim 3 patentably distinguishes over the prior art and, therefore, is in condition for allowance.

Claim 4

In the Office Action at pages 6-8, numbered items 20-21, claim 4 was rejected under 35 U.S.C. §103(a) as being unpatentable over Caswell, et al. in view of Jain and further in view of Kleinrock. Each of these references is newly cited. The reasons for the rejection are set forth in the Office Action and therefore not repeated. The rejection is traversed and reconsideration is requested.

As claim 4 depends directly from amended independent claim 1, Applicants respectfully submit that claim 4 patentably distinguishes over Caswell, et al. for at least the same reasons as independent claim 1 and, therefore, is in condition for allowance.

In the Office Action at page 7, the Examiner asserts that newly cited Jain teaches several parameters that correspond to features of dependent claim 4. Applicants respectfully disagree. First, the Examiner asserts that Jain teaches the ratio of parameters D_i and D. Applicants submit that Jain teaches parameters scaled in time. In the present invention, however, these parameters are scaled by the number of sessions, not service time. The Examiner also asserts that Jain teaches the parameter I (idle time duration for a server). Applicants respectfully disagree. Applicants submit that Jain teaches that the idle time duration for a server is the time when no client requests are processed by the server. Thus, Applicants submit that the idle duration taught by Jain corresponds to either tcr_1 or tcr_2 in Fig. 3A of the present application. In contrast, the parameter I of the present invention is the time from the server response to the client response, shown in Fig. 3A as the time from t_2 to t_3. Thus, Applicants respectfully submit that Jain fails to teach the ratio of parameters D_i and D and parameter I according to the present invention.

For at least these reasons, and those set forth above, Applicants respectfully submit Caswell, et al., Jain and Kleinrock, taken alone or in combination, fail to teach or suggest all of the features of dependent claim 4. Accordingly, Applicants submit that dependent claim 4 patentably distinguishes over the prior art and, therefore, is in condition for allowance.

Claim 5

In the Office Action at pages 8-9, numbered items 22-23, claim 5 was rejected under 35 U.S.C. §103(a) as being unpatentable over Caswell, et al. in view of Kleinrock. The reasons for the rejection are set forth in the Office Action and therefore not repeated. The rejection is traversed and reconsideration is requested.

As claim 5 depends directly from amended independent claim 1, Applicants respectfully submit that claim 5 patentably distinguishes over Caswell, et al. for at least the same reasons as independent claim 1 and, therefore, is in condition for allowance.

In the Office Action at page 8, the Examiner asserts that Kleinrock expressly teaches generating the mean delay time and mean response time of a system. However, Applicants respectfully submit that Kleinrock fails to teach or suggest "a median value of a session time for the specific service," as recited in claim 5.

For at least these reasons, and those set forth above, Applicants respectfully submit Caswell, et al. and Kleinrock, taken alone or in combination, fail to teach or suggest all of the features of dependent claim 5. Accordingly, Applicants submit that dependent claim 5 patentably distinguishes over the prior art and, therefore, is in condition for allowance.

Claims 6-7 and 12-15

In the Office Action at pages 9-14, numbered items 24-29, claims 6-7 and 12-15 were rejected under 35 U.S.C. §103(a) as being unpatentable over Caswell, et al. in view of Zhu. The reasons for the rejection are set forth in the Office Action and therefore not repeated. The rejection is traversed and reconsideration is requested.

As claims 6 and 7 depend either directly or indirectly from amended independent claim 1, Applicants respectfully submit that claims 6 and 7 patentably distinguish over Caswell, et al. for at least the same reasons as independent claim 1 and, therefore, are in condition for allowance.

At pages 9-14 of the Office Action, the Examiner asserts that Zhu teaches all of the limitations recited in claims 6, 7, and 12-15 regarding the server selection module. Applicants respectfully disagree. Applicants submit that Zhu teaches that server selection is based on the most recent load information. According to Zhu, this selection is not based on any simulation or simulated value. In contrast, in the present invention, server load is determined based on simulation and simulated values. More specifically, according to the present invention, the server selection module uses an output of a simulation for each service. Thus, when the load is equally distributed among some servers, the server selection module of the present invention can select the most powerful server, as this selection will not impact the load on the less

powerful servers.

For at least this reason, Applicants respectfully submit <u>Caswell, et al.</u> and <u>Zhu</u>, taken alone or in combination, fail to teach or suggest all of the features of dependent claims 6 and 7, and independent claims 12-15. Accordingly, Applicants submit that dependent claims 6 and 7 and independent claims 12-15 patentably distinguish over the prior art and, therefore, are in condition for allowance.

CONCLUSION

In accordance with the foregoing, it is respectfully submitted that all outstanding objections and rejections have been overcome and/or rendered moot. And further, that all pending claims patentably distinguish over the prior art. Thus, there being no further outstanding objections or rejections, the application is submitted as being in condition for allowance which action is earnestly solicited. At a minimum, this Amendment should be entered at least for purposes of Appeal as it either clarifies and/or narrows the issues for consideration by the Board.

If the Examiner has any remaining issues to be addressed, it is believed that prosecution can be expedited and possibly concluded by the Examiner contacting the undersigned attorney for a telephone interview to discuss any such remaining issues.

If there are any underpayments or overpayments of fees associated with the filing of this Amendment, please charge and/or credit the same to our Deposit Account No. 19-3935.

Respectfully submitted,

STAAS & HALSEY LLP

Date: February 28, 2005   By: David M. Pitcher
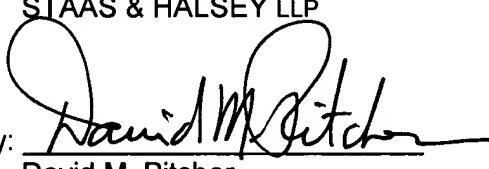
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